

[021] Fig. 1:

A converter housing 1 is in rotationally fixed connection with a drive engine (not shown). A pump impeller wheel 2 can be connected to the converter housing by a clutch 3, which is the so-termed primary clutch. Depending on the actuation pressure in a space 4 and on the converter housing pressure in a space 5, the clutch produces a transmissible torque such that the hydrodynamic torque converter can even be operated when there is slippage of the clutch 3. The converter housing 1 can be connected directly to a turbine rotor 7 by means of a converter bridging clutch 6. A stator 8 is in rotationally fixed connection with a positionally fixed component 9. Radially on the inside, the impeller 2 has a flange 10 which, on the one hand, serves to support the impeller and, on the other hand, has on its inner axial extension 11 cams 12 that enable the speed to be detected by a speed sensor 13. The speed sensor 13 is arranged in the positionally fixed component 9, allowing the signal leads to be positioned statically. A further speed sensor (not shown) determines the rotation speed of the turbine rotor 7, and the signals giving the speed of the turbine rotor 7 and the speed of the pump impeller wheel 2 are passed on to an electronic control unit (not shown ECU) in which characteristic hydrodynamic torque converter values are stored in a performance matrix M, and which can determine the torque of the turbine rotor with reference to those values. Likewise, it is possible to transmit to the electronic control unit further signals from temperature and pressure sensors, so as to render the calculation of the torque more precise.